

## Fit & Equipment



### What kind of bike is for you?

It used to be that people thought “a bike is just a bike.” But today, you’ll find many different kinds in the shops. Now more than ever, the bicycle you should get depends on what you want to do with it.

*Do you want to go on long distance tours, carrying your own luggage?* Look seriously at a heavy-duty touring bike with dropped handlebars, fairly wide aluminum rims, 21 or more speeds, fenders and racks.

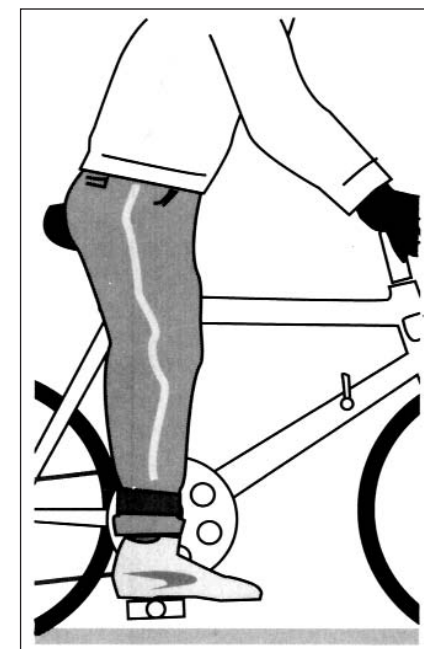
*Do you plan to do mostly fast 40 to 100-mile one-day fitness rides?* Consider a semi-racing style bike with a lightweight responsive frame, 18 to 24 speeds and 1"-wide high pressure tires.

*Will you bicycle on dirt roads and trails?* Test ride a mountain bike with 1-1/2" to 2-1/2" aluminum wheels, 15 speeds and indexed shifting for positive gear changes.

*Maybe you'll just be riding around town?* Mountain bikes and hybrid styles are popular for that purpose too. Think about the kinds of places you'll be parking your bike. Can you find secure locations? Can you bring your bike inside? If not, consider getting a “beater bike” (an old-looking clunker) for town riding.

### Sizing your bike:

Whatever bike you choose, getting one that fits right is very important for your safety and comfort. The basic test is whether you can straddle the bike flat-footed with an inch or two of clearance at the frame's top tube. Clearance for a hybrid bike should be approximately 2". For a mountain bike, you need 3" - 4" of clearance if you plan to blast down hillsides, less if you tour on back country dirt roads.



*Facing page: Bike shops have a wide assortment of bicycles to suit almost every riding style.*

*Above left: You should be able to stand over the bike with a little clearance; just how much depends on the type of bike and what you want to do with it.*

*Above right: Your leg should be straight when you put your heel on the pedal in its lowest position. When you pedal with the ball of your foot, you'll have a slight bend at the knee.*

### Adjusting to fit:

For greatest comfort and safety, you'll want to adjust your bike to fit just right. It takes a little time but is well worth it in the long run. There are many variables involved in fitting your bike precisely to your way of riding and your body. Here are some rules of thumb. Start with them and gradually modify your bike a little at a time as you learn what is and isn't comfortable.

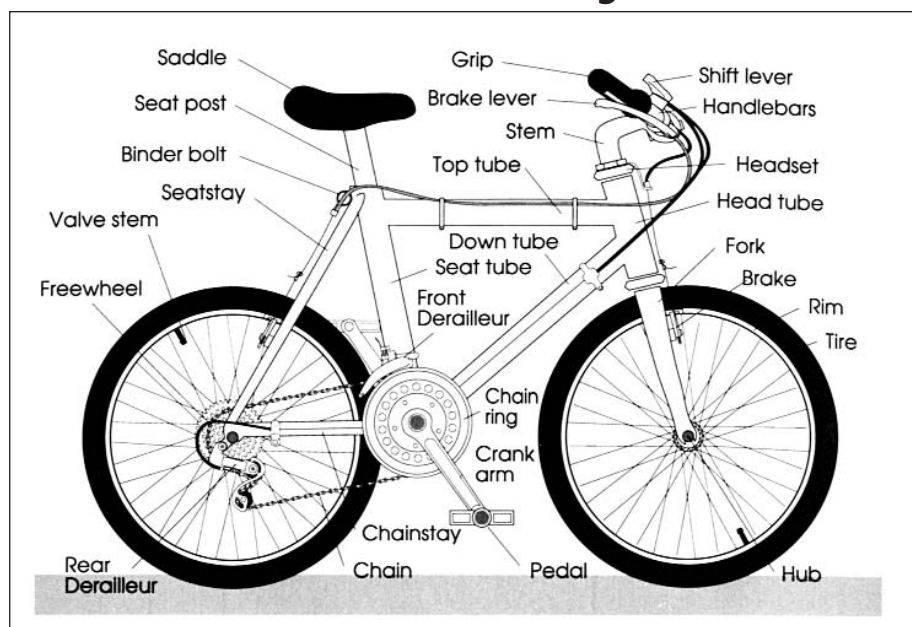
**Saddle height:** Set the saddle so that when you put your heel on the pedal in its lowest position, your leg is just straight. Then, when you pedal with the

ball of your foot, you'll have a slight bend at your knee.

Many people ignore this step. They either have their saddles too high (and they wobble side-to-side as they pedal) or they have them too low (and put too much strain on their knees as they ride). With a little practice, you'll be able to spot people with their saddles set at the wrong height. Why not give them some friendly advice?

**Saddle position and tilt:** If you dropped a string from the front of your saddle, it should fall about 1-1/2" behind the center of the bottom bracket.

## Parts of the Bicycle



(The bottom bracket is where the crank arm's axle goes into the frame.) If the saddle is too far forward, your pedal motion is thrown off; if the saddle is too far back, you'll stretch out too far.

And, for most people, the top of the saddle should be roughly level. Some tilt it slightly forward or back but too much tilt isn't good.

**Handlebar height and stem length:** Generally, the top of your handlebars should be about level with the top of your saddle. To adjust the lean of your upper body, next look at the length of the handlebar stem.

A good test for bikes with dropped handlebars is to put your elbow at the front of the saddle and reach for the handlebar. You should just be able to lay the tips of your fingers across the top of the bars.

**Important:** Make sure you have at least two inches of handlebar stem and seatpost inside the frame. Look for a

mark on the side that says something like "MAX EXT" or "HIDE THIS LINE." These show you how much you need inside the frame for safety.

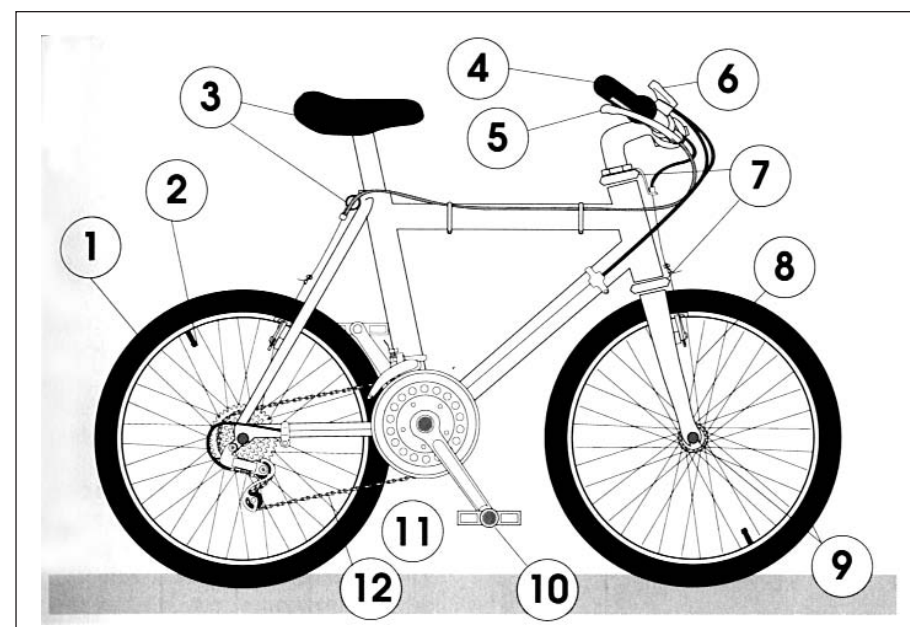
### Basic maintenance

With a few tools and some basic skills, you can do most of the routine maintenance for your bike. It's pretty easy to keep your brakes in shape, to adjust your derailleurs (gear shifters), fix a flat tire and keep the chain clean and lubricated.

And, by taking care of these simple tasks, you can extend the usable life of your bicycle and cut down on major repair costs. Try it!

To learn more, get a good bike maintenance book with clear illustrations and step-by-step instructions or check out online resources. Also contact the local recreation department or community college. They may offer bike maintenance classes.

## 13 Point Quick Check



1. Push the tires against a curb. If you can flatten them, you need more air. Inflate to the pressure shown on the tire's sidewall.
2. Make sure the tire valve stems point straight to the hubs to avoid rim cuts. Such cuts can't be patched.
3. Twist and rock the saddle. It shouldn't move in any direction.
4. Twist and rock the handlebars. They shouldn't be loose.
5. Squeeze the brakes. The levers should work smoothly and not hit the handlebars; the brake pads should hit the rims squarely.
6. Run through the gears while riding. They should shift smoothly onto all sprockets and not throw the chain.
7. Rock the fork and handlebars forward and back and turn from side to side to check for a loose or tight headset (the bearings where handlebars and fork enter the frame). They shouldn't rock or bind.
8. Squeeze pairs of spokes together. They should be tight and the wheels should be straight. Also look for broken spokes.
9. Rock the wheels from side to side. If they move, the hub bearings are loose. Next, spin the wheels. They should roll smoothly. Also keep each wheel's axle nut or quick release lever tight.
10. Rock the pedals front to back. They shouldn't move and should spin freely.
11. Rock the crank arms from side to side. There should be NO play at all.
12. Look closely at the chain. It shouldn't be either caked with grease and dirt or dry and rusty.
13. Look for any loose nuts, bolts and screws and tighten them up.

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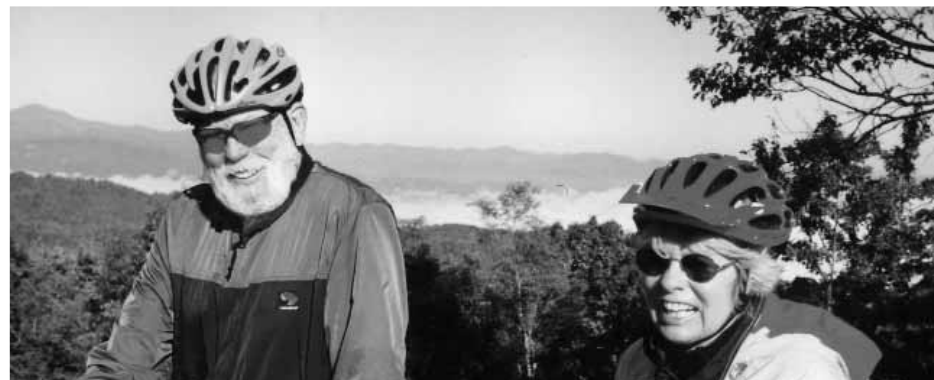
## Protecting your bike from theft

*Bicycles are stolen every day in North Carolina. Here are ten tips to help keep yours from being one of them...*



1. **Lock your bike whenever you leave it.** ...Even if you're just going into a store for a few minutes. A pro can steal your bike in seconds.
2. **Lock your bike where it can be seen.** If you lock it behind the bushes, you give the thief a chance to work in private.
3. **Most locks, chains, or cables can be broken in a few seconds.** For best protection, get a high security lock like a U-bolt shaped lock and use it. These won't stop every thief but they will stop most.
4. **Don't leave fancy accessories on your bike when you park it.** Expensive bags, tool kits, and clip-on lights are easy to steal. Take them with you.
5. **Don't leave your bike outside at odd hours.** Take it inside if you can. The best lock won't keep someone from taking your brakes, saddle, or seatpost.
6. **Lock AT LEAST your front wheel and frame to something solid.** It's better to lock both wheels if you can—especially if you have quick release hubs. Think about taking your front wheel when you lock up.
7. **If you have a quick-release seatpost bolt, take your saddle with you when you park.** That'll make the bike less attractive AND a lot harder to ride! And it'll keep your saddle from being stolen.
8. **Engrave an ID number on expensive parts.** Otherwise, if they're recovered, you'll have a hard time identifying them. The most important parts are those easiest to remove: seat post, handlebars & stem, derailleur, brakes, crank arms and wheels.
9. **Register your bike with the police.** If your police department has such a program, take advantage of it. It can help them return your bike if it's recovered. Be careful though, not to let them stamp a number into your frame. Some agencies do this and it can ruin a really good frame.
10. **Make your bike look really ugly.** If it's dirty and plain looking or has a gross paint job, it may not attract some thieves. Ugly and unique bikes are also less tempting because they are easier to identify by their owners.

## Protecting your brain in a crash



In North Carolina, children under 16 are required to wear a bicycle helmet. It's a good idea for adults, too. A bicycle helmet may be the single most important piece of equipment you can buy. Studies show that about 75% of all cycling deaths are caused by head injuries. And, each year, many more cyclists suffer permanent brain damage as a result of a crash. Don't risk it... wear a helmet every time you ride!

Helmets come in many styles and colors and there is one that is just right for you. Proper sizing is critical for your helmet to protect your head in case of a crash. Here are some important points on helmet fit.

- Make sure your helmet is the right size and doesn't rock from side to side; use the interchangeable interior pads to create a snug fit.
- The helmet should sit level on your head; you should be able to see the front edge when you look up.
- The neck strap should be snug, but not too tight; the rule of thumb is that there should be enough slack for you to easily fit your fingers between your chin and the strap.

Be sure to replace your helmet after a crash—they are designed to withstand one crash only.

### Helmet buying tips:

- Get a helmet that meets the Consumer Product Safety Commission standard. Look for a CPSC sticker inside the helmet or on the box.
- Don't buy unless you can try it on first. It shouldn't feel tight or uncomfortable. The salesperson can fit your helmet with different sized foam pads to match the shape of your head.
- If you plan to tour, race, trail ride or commute long distances in hot weather, cooling is very important. Look for a light-colored helmet with plenty of ventilation.
- Be careful with your helmet. Toxic solvents, grease, paints or stickers may ruin the shell without your seeing the damage.

*For more information on bicycle helmets visit the Bicycle Helmet Safety Institute at [www.helmets.org](http://www.helmets.org)*